

## **II. REMARKS/ARGUMENTS**

### **A. Summary of the Amendments**

The application currently contains 26 claims, numbered 1, 3, 4, 6, 9-20 and 22-31.

Claims 8 and 21 have been cancelled by the current amendment.

Claims 2, 5 and 7 remain cancelled.

Claim 20 has been rewritten to include the features of claim 21, which has been cancelled.

The dependency of claim 22 has been amended to reflect the cancellation of claim 21.

Minor amendments have also been made to claims 1, 13, 20, 22, 29, 30 and 31 in order to clarify the subject matter being claimed.

Support for the wording "priority threshold" appears on page 16, line 3, *inter alia*, of the specification as filed.

No new subject matter has been added to the application by way of the current amendment.

### **B. Statements of Rejection and Reply**

On page 3 of the Final Action, the Examiner has rejected claims 1, 3-4, 6, 8-17, 10-22, 26-27 and 29-31 under 35 USC 102(e) as being anticipated by US Patent 6,980,515 (hereinafter referred to as Schunk *et al.*).

Claims 1, 29, 30 and 31

Each of these claims includes common language to the effect of:

**if the usage level is not below the occupancy threshold, allocating resources from the resource pool to satisfy the connection request only if the priority level of the connection request is higher than a priority threshold.**

The above fragment of claim language is directed to the scenario where the usage level of the resource pool will be below the occupancy threshold<sup>1</sup>. Now, when the priority level of the connection request is lower than a *priority threshold* (and continuing to consider the scenario where the usage level of the resource pool is below the occupancy threshold), the present invention claims that resources are not allocated to satisfy the connection request. However, where the priority level of the connection request is higher than the *priority threshold* (and again continuing to consider the scenario where the usage level of the resource pool is below the occupancy threshold), the present invention claims that resources *are* nevertheless allocated to satisfy the connection request.

Stated differently, in those cases where the priority level of the connection request is above a *priority threshold*, the claimed invention contemplates that resources *are* allocated to satisfy the connection request **despite the usage level not being below the occupancy threshold \*\***.

This needs to be carefully contrasted with the teachings of the cited art. More specifically, let us consider the passages of Schunk *et al.* cited by the Examiner in the Advisory Action (*i.e.*, Fig. 15 and the accompanying description in col. 17, lines 4-57). Here, the maximum number of modems is 32, while the number of modems currently available is 29. As stated by Schunk *et al.* in col. 17, lines 21-24: “The difference between this number [*i.e.*, 29] and the number from the maximum global resources field 340 [*i.e.*, 32] indicates the number of modems in use by the VR on the entire switch [*i.e.*, 3].” If one adopts the terminology of the claimed invention, this means that the “usage level” is 3 (since only 3 out of 32 modems are in use).

---

<sup>1</sup> which, it is recalled, is a function of the priority level of the connection request.

Next, let us consider the closest equivalent in Schunk *et al.* of an “occupancy threshold that is a function of the priority level of the connection request”. To this end, Schunk *et al.* teaches a “local QoA” field 348 that indicates a different number of modems that need to be available in order for a request having a certain QoA class (or “priority level”, for the sake of argument) to be granted access to the switch. Specifically, the number of modems that need to be available can take values of 0, 8, 16 and 24, corresponding to QoA classes of 1, 2, 3 and 4, respectively. Thus, as stated by Schunk *et al.*, “level one QoA accesses the switch when there are zero or more modems available (100% of the time), level two QoA accesses the shelf when there are 8 or modems available (75% of the time)” and so on.

Therefore, in Schunk *et al.*, when a resource request is received, consideration is given to the QoA (*i.e.*, the “priority level”) of the resource request. Then, one determines, for that QoA, the number of modems that need to be available in order for the request to be granted (*i.e.*, the “occupancy threshold that is a function of the priority level”). Then, if the actual number of available modems is above this number (*i.e.*, if the “usage level” is below the “occupancy threshold”), the resource request is granted. Otherwise (*i.e.*, if the usage level is not below the occupancy threshold), the connection request is denied (see Schunk *et al.*, col. 18, lines 50-52: “if there are no resources available that match the specified QoA [...], the connection manager [...] causes the call to be terminated”).

Thus, in Schunk *et al.*, when the usage level is not below the occupancy threshold (that is dependent on the priority level of a given request), the request will be denied regardless of its actual priority level. Conversely, there are no cases in Schunk *et al.* where the request will be granted despite the usage level not being below the occupancy threshold. This is in direct contrast with what was shown earlier in this section when describing the presently claimed invention (see \*\* above).

For completeness, it should also be pointed out that in the Advisory Action dated January 16, 2007, the Examiner equated the “pre-determined level” of former claim 1 with the number of currently available resources in Schunk *et al.* However, this

association does not hold, since the pre-determined level of the claimed invention is in fact a *priority threshold*. While this has always been the intent, an amendment has nevertheless been made for clarity.

In summary, it is worth repeating the Applicant's argument made previously in the responses dated June 16, 2006 and November 24, 2006, to the effect that Schunk *et al.* makes no allowance for allocating resources required by a connection request if the usage level of a resource pool happens not to be below the "usage threshold". In such a situation the connection is always rejected (see previously cited passages of Schunk *et al.* and also column 8, line 66 to column 9, line 2; column 18, lines 8-12), which is not the case in the claimed invention.

Therefore, it is respectfully submitted that the Examiner has not shown, nor does the cited art teach, that resources are allocated from the resource pool to satisfy the connection request even when "the usage level is not below the occupancy threshold" on the basis of whether "the priority level of the connection request is higher than a *priority threshold*".

It should be noted that the significance of the *priority threshold* in the claimed invention advantageously allows certain higher-priority connection requests<sup>2</sup> to be allocated resources even when these resources would not usually have been considered sufficiently available to allow requests of that priority level to be allocated. Effectively, this can turn otherwise unavailable resources into "hidden" resources (see Applicant's description on page 15, line 25 to page 16, line 13)

In view of the foregoing, the Applicant respectfully submits that there is at least one feature of claims 1, 29, 30 and 31 that is not taught or disclosed in Schunk *et al.* and, as such, the anticipation rejection cannot stand. The Examiner is therefore respectfully requested to withdraw the rejection of claims 1, 29, 30 and 31 under 35 U.S.C. 102(e).

Claim 20

Claim 20 is similar to claims 1, 29, 30 and 31 and therefore is allowable for the same reasons as those set forth above in support of claims 1, 29, 30 and 31.

In addition, the Applicant respectfully submits that Schunk *et al.* neither teaches nor suggests “a multi-service gateway [with] a pool of port processing software entities (PPSEs), *each* PPSE having sufficient capacity to provide processing for *any* of the packet-switched ports” (*bold italics* added). Rather, Schunk discloses a multi-service network switch system architecture where “each slot on the switch preferably accommodates a single interface module (a card), referred to as a forwarding module (FM) 10. Each FM 10 preferably includes the on-board intelligence, route forwarding, and route processing information for distributed packet forwarding” (column 3, lines 39-48). As such, the use of a pool of port processing resources, shared by all ports of the multi-service gateway, is fatally absent from Schunk *et al.*<sup>3</sup>.

For this additional reason, it is respectfully submitted that there is at least one feature of claim 20 that is not taught or disclosed in Schunk and, as such, that the rejection under 35 U.S.C. 102(e) cannot stand. The Examiner is therefore respectfully requested to withdraw the rejection of claim 20.

Claims 3-4, 6, 9-17, 22, 26 and 27

Claims 3-4, 6, 9-17, 22, 26 and 27 depend directly or indirectly from independent claim 1 or independent claim 20 and, as such, incorporate by reference all the features contained therein, including the features which have been shown above to be absent from Schunk *et al.* Accordingly, for the same reasons as those presented above with respect to independent claims 1 and 20, the Examiner is respectfully requested to withdraw the rejection of dependent claims 3-4, 6, 9-17, 22, 26 and 27.

Claim 19

---

<sup>2</sup> (but not necessarily those having the highest priority)

<sup>3</sup> Incidentally, in the Applicant's respectful view, the Advisory Action does not demonstrate that adequate consideration has been given by the Examiner to the Applicant's point of view regarding this fatal flaw of Schunk *et al.*, such view having been presented in the response to the Final Action.

Claim 19 depends directly or indirectly from independent claim 1 and, as such, incorporates by reference all the features contained therein, including the features which have been shown above to be absent from Schunk *et al.* Accordingly, for the same reasons as those presented above with respect to independent claim 1, the Examiner is respectfully requested to withdraw the rejection of dependent claim 19.

In addition, claim 19 includes the feature of:

**selecting the pool occupancy threshold to achieve a probability of blocking that is less than a pre-determined value.**

The Examiner refers to Schunk *et al.* col. 15, line 64 to col. 16, line 10, which the Examiner says “recite associating an access threshold with each QoA level and if resource utilization exceeds the threshold corresponding to the QoA level the request is refused whereby system resources become limiting once threshold reaches 25 percent.” However, it should be noted that the numerical values used in this passage refers to percentages of utilization of a set of modems, not to a probability of blocking. It is respectfully submitted that the Examiner appears to have misunderstood the claimed feature and, in the absence of any prior art teaching of this feature, the Examiner is therefore respectfully requested to withdraw the rejection of claim 19 under 35 USC 102(e).

#### **D. Summary of Rejection under 35 USC 103(a) and Response**

On page 10 of the Final Action, the Examiner has rejected claims 18, 23-25 and 28 as being obvious in light of Schunk *et al.* in further view of US patent 6,516,059 (hereinafter referred to as Shaffer). The Applicant respectfully traverses this rejection for the following reasons.

#### **Claim 18**

Claim 18 is dependent on independent claim 1, and as such incorporates by reference all the features contained therein, including the features already found to have been absent from Schunk *et al.* (see earlier in this response). The Applicant further submits that this feature is also absent from Shaffer.

Specifically, Shaffer merely discloses a method and system that adaptively assigns call processing to either a centrally accessed unit or a particular telephony device in a network of telephony devices based on the current availability of resources. The centrally accessed unit is assigned to perform each call-related task until a predetermined threshold of processing power is being accessed. Once the predetermined threshold is reached, subsequent requests are assigned to the telephony devices (column 2, lines 59-65). Shaffer neither mentions nor suggests the allocation of resources based on “a priority level of the incoming request” and “a pool occupancy threshold that is a function of the priority level of the connection request”, let alone the allocation of resources when the usage level is not below the occupancy threshold “only if the priority level of the connection request is higher than a *priority threshold*”.

Since the combination of Schunk *et al.* and Shaffer fails to disclose all of the features of independent claim 1, the Applicant respectfully submits that the combination of these references fails to establish a *prima facie* case of obviousness as per §706.02(j) and §2142 of the MPEP<sup>4</sup>. As such, the Examiner is respectfully requested to withdraw the rejection of dependent claim 18.

#### Claims 23-25 and 28

Claims 23-25 and 28 depend from independent claim 20, and as such incorporate by reference all the features contained therein, including the features which have been shown above to be absent from Schunk *et al.* and Shaffer. Accordingly, for the same

---

<sup>4</sup> For the Examiner to establish a *prima facie* case of obviousness, three criteria must be considered: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings, (2) there must be a reasonable expectation of success, and (3) the prior art references must teach or suggest all of the claim limitations. MPEP §§ 706.02(j), 2142 (8<sup>th</sup> ed.).

reasons as those presented above with respect to claim 18, the Examiner is respectfully requested to withdraw the rejection of dependent claims 23-25 and 28.

### **C. NON-ART REJECTIONS**

On page 4 of the Final Action, under the rubric of the aforesaid rejection under 35 USC 102(e), the Examiner has objected to the usage of the word “adapted” in claims 13, 20 and 22 as “not being a positive recitation of the feature of the processing resource/resource manager”. The Applicant respectfully disagrees but has nevertheless amended claims 13, 20 and 22 in the interest of advancing prosecution. Specifically, the Applicant has replaced “adapted” with “configured”. Claims 13, 20 and 22 are now considered to be in condition for allowance.

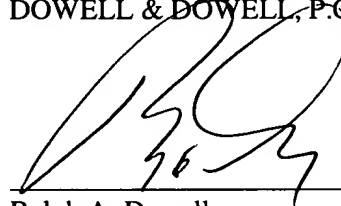


### III. CONCLUSION

In view of the above, it is respectfully submitted that claims 1, 3, 4, 6, 9-20 and 22-31 are in condition for allowance. Reconsideration of the rejections and objections is requested. Allowance of claims 1, 3, 4, 6, 9-20 and 22-31 at an early date is solicited.

If the claims of the application are not considered to be in full condition for allowance, for any reason, the Applicant respectfully requests the constructive assistance and suggestions of the Examiner in drafting one or more acceptable claims or in making constructive suggestions so that the application can be placed in allowable condition as soon as possible and without the need for further proceedings.

Respectfully submitted,  
DOWELL & DOWELL, P.C.

A handwritten signature in black ink, appearing to read 'R. Dowell', is written over a horizontal line.

Ralph A. Dowell  
Reg. No. 26,868  
Agent for the Applicant

Dated: February 16, 2007

DOWELL & DOWELL, P.C.  
2111 Eisenhower Avenue  
Suite 406  
Alexandria, Virginia 22314  
U.S.A.

Telephone: (703) 415-2555  
Facsimile: (703) 415-2559